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10/663,843	09/17/2003	Shigekazu Zen	Q77444	2852

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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/663,843
Filing Date: September 17, 2003
Appellant(s): ZEN, SHIGEKAZU

Fang Liu
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 23, 2006 appealing from the Office action mailed on February 23, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 1 and 4-10.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. For completeness of the record, the original documents abstracted by the two Derwent abstracts reference have now been translated into English and cited herein. The two Derwent abstracts are 1993-206225 (now cited as DE 4142134) and 1978-57608A (now cited as JP 53-075330). The Examiner will however only rely on the disclosure available in the previously cited abstracts in order to not raise any new issues in this Examiner's Answer.

(7) Claims Appendix

A substantially correct copy of appealed claims appears on pages 13-15 of the Appendix to the appellant's brief. The minor errors are as follows: in claim 5, line 2, "from ," appears to be a typographical error.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

5,389,300 Schmitt et al. 2-1995

4,142,134 Pallaske et al. 6-1993 (English translation provided herewith)
* *previously cited as Derwent abstract 1993-206225*

53-075330 Mukai et al. 7-1978 (English translation provided herewith)
* *previously cited as Derwent abstract 1978-57608A*

(9) Grounds of Rejection

The following ground of rejection is applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. (US 5,389,300) in view of DE 4142134 and JP 53-075330.

Schmitt et al. disclose formulations for protecting sawn timber against fungi and insects (column 1, lines 4-6; column 3, lines 27-32). In addition to o-phenylphenol and iodopropargyl derivatives as active ingredients, pyrethroids are disclosed to be used

together to increase the spectrum of action or achieve specific effects (column 4, lines 38-45; claim 1). Specifically disclosed pyrethroids include cyhalothrin, cypermethrin, permethrin and deltamethrin[1] (id.). The pyrethroids can be used at a concentration range of 0.001 to 10 wt% (column 4, lines 51-53). The formulation is prepared by dissolving the active compounds in a solvent, with auxiliaries such as emulsifiers (column 2, lines 61-66). Butyl benzoate is specifically disclosed as a suitable solvent (column 3, lines 9-12). Suitable emulsifiers include nonionic and anionic surface active agents (column 3, lines 17-26). Solvent amount in the concentrate formulation is at least 20 wt% (column 4, line 54; column 5, lines 8-25). Surfactant concentration is about 5-25 wt% (see claim 3 and column 5, lines 4-25). Concentrated emulsions are disclosed (column 2, lines 41-44).

DE 4142134 discloses cypermethrin and permethrin for protection of wood against termites (translation page 4). JP 53-075330 discloses permethrin for protection of wood against insects (see translation page 1, the claim and the last two full paragraphs).

The difference between the claimed invention and the primary reference by Schmitt et al. is that Schmitt et al. do not explicitly exemplify a combination of a pyrethroid, surfactant, and an aromatic solvent such as butyl benzoate. However, butyl benzoate is particularly pointed out by Schmitt et al. (column 3, line 12) and numerous pyrethroids are claimed as part of Schmitt's composition (see claim 1, column 8, lines 23-30). Schmitt et al. provide the suggestion to add said pyrethroids for the purpose of

[1] These pyrethroids have structures that fall within Appellant's formulae in claim 4.

increasing the spectrum of action or to achieve specific effects, i.e. further protect the wood against insects (column 3, lines 27-32). The secondary references provide additional motivation to utilize cypermethrin or permethrin by disclosing their known use in wood protection against wood damaging insects. One having ordinary skill in the art would therefore have been amply motivated to further protect Schmitt's sawn timber against insect damage by including a pyrethroid insecticide such as cypermethrin or permethrin.

Appellant's formulation, "pesticidal emulsifiable concentrate" is disclosed and suggested by Schmitt et al. The definition of pesticidal emulsifiable concentrate is given by appellant as "normally composed of a pesticidal active ingredient compound, a surfactant and an organic solvent." (specification page 1, lines 11-13). Schmitt et al. clearly disclose such a formulation type in that the corresponding ingredients are all disclosed in claim-recited concentration amounts, wherein concentrated emulsions are disclosed (column 2, lines 41-44). Use of the organic solvent butyl benzoate is preferred (column 3, lines 11-12), so selection of the same would have been fairly suggested.

To date, no objective evidence of nonobviousness has been provided with respect to the amended subject matter that remains in the claims, i.e. formulations wherein the aromatic ester is represented by formula [1].

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because

every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the combined teachings of the cited references.

(10) Response to Argument

Appellant's arguments have been given due consideration but they were deemed unpersuasive.

Appellant argues that the prior art does not provide the necessary suggestion or motivation and reasonable expectation of success for adding a pyrethroid to Schmitt's composition to provide a pesticidal emulsifiable concentrate comprising (a) 1-60 wt% pyrethroid, (b) 2-15 wt% surfactant, and (c) 15-90 wt% aromatic ester solvent such as butyl benzoate. The Examiner cannot agree. Schmitt et al. disclose emulsifiable concentrates (column 2, lines 41-44), pyrethroids up to 10 wt% (column 4, lines 51-53), 5-25 wt% surfactants such as anionics and nonionics (column 3, lines 17-26), and at least 20 wt% of a solvent such as butyl benzoate (column 3, lines 9-12). Numerous pyrethroids, including cypermethrin and permethrin are specifically set forth (column 4, lines 38-45; claim 1) for the purpose of increasing the spectrum of action or to achieve specific effects (column 3, lines 27-32).

Hence, even by itself Schmitt's disclosure is fairly suggestive of the claimed invention. When the teachings of the secondary references are taken into account, wherein cypermethrin and permethrin are specifically taught to protect wood against insects and/or termites, sufficient motivation to select such pyrethroids is found.

Appellant's suggestion that reasonable expectation of success may not be present is difficult to fathom. Wood products are known to be susceptible to fungi and

insects. Thus, there would have been reasonable expectation of success for adding a wood-protective pyrethroids such as cypermethrin or permethrin, because said pyrethroids would have been expected to further protect wood products against damage.

Appellant also argues that the claimed invention is superior in emulsion stability after diluting with water and has low-irritation. Applicant cites specification page 1, line 24 to page 2, line 16 and Test Example 2 (page 13). This argument is most unpersuasive. First, specification pages 1 to 2 provide absolutely no objective evidence of nonobviousness. At best, it contains prose that asserts advantages, but that's a far cry from objective evidence of nonobviousness to rebut the prima facie case of obviousness of record. Second, Test Example 2 is not even relevant to the present invention. The formulation used in Test Example 2 is Formulation Example 5. The makeup of Formulation Example 5 is reproduced below (from specification page 10):

> 11 Parts of pyriproxyfen, 10 parts of T-MULZ PB High (surfactant manufactured by Harcros Co., nonionic surfactant), 50 parts of benzyl acetate and the residual part of Solvesso 150 were combined to make 100 parts, followed by sufficient mixing to obtain a pesticidal emulsifiable concentrate of the present invention.

Hence, the tested formulation does not contain a pyrethroid since pyriproxyfen is not a pyrethroid. The tested formulation also does not contain an aromatic solvent that meets the claims since benzyl acetate has the structure Ph-CH_2-O-Ac, whereas the claimed aromatic solvent must be Ph-CH_2-COOR (with all else being equal to benzyl acetate).

In other words, the Ph-CH_2- moiety in benzyl acetate is not bonded to a carbon, as required in the instant claims. Consequently, it is difficult to believe that appellant would even advance the argument that such data is probative evidence of "unexpected superiority." Appellant's disclosure is devoid of any objective evidence of nonobviousness that pertains to the presently claimed invention.

For these reasons, it is respectfully submitted that this ground of rejection should be maintained.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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